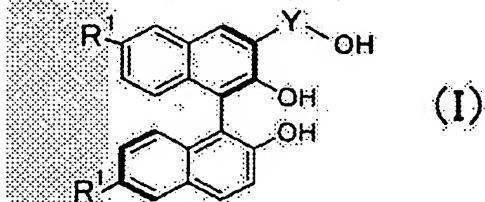


ABSTRACT OF THE DISCLOSURE

An asymmetric reaction catalyst is obtained by mixing a pentavalent niobium compound and an optically active triol or tetraol having a binaphthol structure of R or S configuration, and the triol is represented by the following
5 formula:



(wherein, Y is divalent hydrocarbon and R¹ is a hydrogen atom, a halogen atom, a trifluoromethyl group, or an alkyl group or alkoxy group having at most 4 carbons).